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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/361,118	07/27/1999	HISASHI WATANABE	Q55086	5143

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SUGHRUE MION ZINN MACPEAK & SEAS  
2100 PENNSYLVANIA AVENUE  
WASHINGTON, DC 200373213

EXAMINER
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FIORILLA, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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1731

24

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/361,118

Applicant(s)

WATANABE ET AL.

Examiner

Christopher A. Fiorilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. Claims 9-12 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 10.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al. (5,672,554) in view of either one of Huang (4,919,868) or Ali et al. (5,688,450) for the reasons as set forth in the previous office action.

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5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al. (5,672,554) in view of Aihara et al. (6,258,440) and *Dictionary of Ceramic Science and Engineering* by O'Bannon.

6. Applicant's arguments filed February 14, 2003 have been fully considered but they are not persuasive.

**With respect to the rejection of the claims under 103 with respect to Mohri et al. (5,672,554) in view of either one of Huang (4,919,868) or Ali et al. (5,688,450) applicants argue:**

**One of ordinary skill in the art would not have been lead to combining the teaching of these references with Mohri et al. because their technical field are much different from each other and they do not relate to the same art.**

This argument is not persuasive. All of these references relate to ceramic materials, more specifically they all disclose mixing slurries of ceramic materials. Thus, they are all relate to the same art, i.e. the art of mixing ceramic slurries. Applicants further argue that the references relate to making different compounds by different reactions. The rejection relies upon these references to teach the mixing process which is a physical process not dependent on the particular ceramic material being used.

**The statement in Mohri et al. that conventional mixing can be used refers to conventional methods of mixing alumina slurries. Mohri et al. describe two such methods, namely ball mill a vibration mill, each of which involves grinding. Applicants submit that it was not conventional to mix alpha alumina by ultrasonic mixing.**

This argument is not persuasive. Disclosed examples and preferred embodiments do not constitute teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 169 USPQ 423 (CCPA

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Thus, Mohri et al.'s disclosure of two specific mixing processes does not limit the broad statement that m be carried out in a conventional manner.

**Even if Huang discloses ultrasonic irradiation to reduce the formation of agglomerates, it do mean that it is obvious to replace the mixing methods using the grinding media in Mohri et al. with ultrasonic mixing technique of Huang because Huang does not disclose or teach the alumina powde the present invention that contains small amounts of agglomerates and has a uniform particle shap particle size recited in claim 1. Further, Huang merely discloses the use of an ultrasonic mixer.**

This argument is not persuasive. The test for obviousness is not whether the features of a seconda reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed must be expressly suggested in any one or all of the references. Rather, the test is what the combined teac the references would have suggested to those of ordinary skill in the art. In re Keller 208 USPQ 871, 881; Sernaker 217 USPQ 1. It is maintained that the combined teachings of the references would have sugges of ordinary skill in the art that the mixing technique of Huang could be used in the process of Mohri et al. was not cited to teach the materials, but rather a mixing method. The primary reference calls for convent mixing, not grinding. Huang clearly teaches a mixing technique.

**Applicants submit that the examiner misunderstands the recitations of the present claims. A to the present invention, the particles having substantially no fractures surfaces are the alumina po as a raw material, and are not particles that have been mixed or milled in the steps that occur after of preparing the slurry. Thus, it is irrelevant whether some particles are unchanged during mixing milling.**

**One of the features of the present invention is to use alumina powder comprising polyhedral having substantially no fractured surface. The alumina powder employed in the present invention includes polyhedral powders having substantially no fractured surface. The presence of a single pa having substantially no fractured surface would not satisfy the recitations of the present claims.**

**By using such specific alumina powder as set forth in claim 1, applicants can achieve the pre invention.**

This argument is not persuasive. Mohri et al. discloses at cols. 4-5 a method of preparing the alum powder for use in the process. Mohri et al. discloses that after these powders are prepared there may be s

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instances where the powders are subjected to simple grinding (col. 5, line 35). This refers to the powder b  
slurry is prepared.

**The fact that Mohri et al. disclose an alumina purity of not less than 99.95% by weight does that Mohri et al. suggest a purity of 99.99% by weight. The powder purity levels disclosed in Morh encompasses the claimed range, but Mohri et al. do not suggest a purity of 99.99% or more as claim present invention.**

This argument is not persuasive. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. In re Wertheim, 541 F.2d257, 191 USPQ 90 (CCPA 1976); In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

**With respect to the rejection of the claims under 103 with respect to Mohri et al. (5,672,554) in view of Aihara et al. (6,258,440) and Dictionary of Ceramic Science and Engineering by O'Bannon applicants argue:**

**Aihara et al is not related to Applicants' claimed type of alumina powder starting material. Thus, the teachings of Aihara et al do not overcome the deficiencies in the disclosures of Mohri et al. relating to the type of alumina powder starting material. Particularly, Aihara et al is not related to alumina powder having polyhedral shape. Therefore, even if the disclosures of Mohri et al are combined with Aihara et al, the present invention isnot obvious over the combination of these references.**

This argument is not persuasive. Aihara et al. generically teaches alumina which encompasses all types of alumina particles. Further, Aihara et al. was not cited to teach the particle type. This is taught by the primary reference. Aihara et al. is cited to teach a type of mixing.

**While Mohri et al is directed to an alumina composition which provides on sintering an alumina ceramic having wrap resistance and high dimensional precision, Aihara et al is directed to a ceramic part to be exposed to a corrosive gas. Therefore, Applicants respectfully submit that the technical field of Mohri et al is not related to that of Aihara et**

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**al. Accordingly, it is respectfully submitted that the Examiner has not established a motivation to combine Mohri et al. with Aihara et al.**

**The Examiner's argument seems to be based on the fact that two different mixing techniques are known in the art. However, Applicants respectfully submit that various mixing methods being known in the art for use in different and unrelated processes and purposes, and in different and unrelated references, does not make their combination obvious to one of ordinary skill in the art.**

**The Federal Circuit has held that the fact that each element in a claimed invention is old or unpatentable does not determine the non-obviousness of the claimed invention as a whole.**

**Applicants respectfully submit that the Examiner is merely recreating Applicants' invention from various unrelated pieces of art using hindsight.**

This argument is not persuasive. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller* 208 USPQ 871, 881; *In re Sernaker* 217 USPQ 1. It is maintained that the combined teachings of the references would have suggested to one of ordinary skill in the art that the alumina of Mohri et al. could have been mixed by the process of Aihara et al.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In fact the examiner's rejection relies on a statement in the

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primary reference that any conventional mixing technique may be used in a process and a secondary reference which teaches a conventional mixing technique used in the same field (ceramics processing).


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Fiorilla whose telephone number is 703-308-0674. The examiner can normally be reached on M-F, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
**Christopher A. Fiorilla**  
**Primary Examiner**  
**Art Unit 1731**